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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/665,911

09/20/2000

Yasuhiko Nomura

001221

5447

38834

7590

01/13/2005

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EXAMINER

LANDAU, MATTHEW C

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/665,911

Applicant(s)

NOMURA ET AL.

Examiner

Matthew Landau

Art Unit

2815

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 December 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 6 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 28 December 2004. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-3 and 5-10.

Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

10. ☐ Other: _____

Tom Thomas
TOM THOMAS
SUPERVISOR IN CHARGE
TECHNICAL CENTER 2830

Continuation of 2. NOTE: The proposed amendment essentially incorporates claim 3 into claim 1. This proposed amendment raises new issues that would require further consideration and/or search since all other dependent claims (claim 10 for example) would form a combination of limitations of a scope that has not been previously considered.

Continuation of 5. does NOT place the application in condition for allowance because: In response to Applicant's arguments that "Hatano discloses that the addition of Mg and C increases the carrier concentration, but does not teach or suggest that a high resistance can be obtained by doping of C", the Examiner never suggested doping of C results in a high resistance. Applicant further argues that "The Examiner has not shown how the doping of Mg and C makes suggestion or motivation to modify the teaching of Hata", the Examiner stated the motivation in the Final Rejection. Specifically, the Examiner stated that the ordinary artisan would be motivated to modify the invention of Hata by including carbon impurities in the first current blocking layer "for the purpose of forming a deep acceptor level, thereby compensating the residual donors". This motivation was taken directly from Hatano. As disclosed by Hatano and acknowledged by Applicant's response, compensating for residual donors results in increased carrier concentration. The ordinary artisan would realize that increasing carrier concentration results in increased efficiency of the device, regardless of whether or not the layer functions to pass current or to block current. In the case of Hata, increasing the carrier concentration of the current blocking layer allows the layer to more effectively perform its function of blocking n-type carriers.